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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,930	10/31/2003	Anant Achyut Setlur	128454-1	8944

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EXAMINER

KOSLOW, CAROL M

ART UNIT PAPER NUMBER

1755

DATE MAILED: 02/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/697,930

Applicant(s)

SETLUR ET AL.

Examiner

C. Melissa Koslow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,8-17 and 19-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 and 3 is/are allowed.
- 6) ☒ Claim(s) 8-12, 14-16, 19-26 and 29-31 is/are rejected.
- 7) ☒ Claim(s) 13,17 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

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This action is in response to applicants' amendment of 16 December 2005. The amendment to the specification has overcome the objection to the disclosure and the 35 USC 112 second paragraph rejection. The rejections over copending application 10/317,424 are withdrawn since that application is abandoned. The amendments to the claims have overcome the objections to the claims, the 35 USC 112 first paragraph rejection, the 35 USC 102(b) rejection over JP 2000-290648; the 35 USC 102(e) rejection over U.S. patent 6,676,853 and the art rejections over EP 406,554; JP 56-155282; JP 56-155281 and U.S. patents 4,512,912; 6,673,473; 6,517,741; 4,604,549 and 6,509,685. Applicant's arguments with respect to the remaining rejections have been fully considered but they are not persuasive.

Claims 16 and 20 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

These claims teach the phosphor produced by the claimed process comprises a material having the formula $(D_{1-x}Eu_x)A_3B_4O_{12}$. This teaching that the phosphor process comprises a material having the formula $(D_{1-x}Eu_x)A_3B_4O_{12}$ is new matter. The specification teaches the phosphor produced by the claimed process has the formula $(D_{1-x}Eu_x)A_3B_4O_{12}$.

Claims 16, 19, 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 is indefinite since it depends upon canceled claim 18. Claims 16, 20 and 21 are indefinite since x is not defined.

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The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 8-12, 14, 15, 21-26 and 28-31 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 8-10, 18 and 22-23 of copending Application No. 10/317,423. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of application 10/317,423 teaches a mercury vapor lamp comprising a blend of phosphor comprising (Y,Gd)Al₃B₄O₁₂:Eu, as the red phosphor; LaPO₄:Ce,Tb as the green phosphor; Sr₄Al₁₄O₂₅:Eu as the blue-green phosphor and BaMgAl₁₀O₁₇:Eu as the blue phosphor. (Y,Gd)Al₃B₄O₁₂:Eu encompasses the formulas YAl₃B₄O₁₂:Eu, GdAl₃B₄O₁₂:Eu and (Y_{1-x}Gd_x)Al₃B₄O₁₂:Eu, where 0<x<1. While the amount of europium is not given in the taught borate phosphor, one of ordinary skill in the art knows that it is the amount that is effective to activate the phosphor. This amount would at least overlap the claimed range, which is effective to activate the phosphor. The reference suggests the claimed phosphor blend and light source.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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Applicants' comments with respect to this rejection are acknowledged. It is noted that Application No. 10/317,423 was allowed 25 February 2005.

Claims 8-12 and 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-290648.

This reference teaches phosphors having the formulas $(\text{Gd}_{1-x}\text{Eu}_x)\text{Al}_3\text{B}_4\text{O}_{12}$ where x is 0.005-0.2; $(\text{YGd}_{0.9}\text{Eu}_{0.1})\text{Al}_3\text{B}_4\text{O}_{12}$; $(\text{LaGd}_{0.9}\text{Eu}_{0.1})\text{Al}_3\text{B}_4\text{O}_{12}$; $(\text{Y}_{0.9}\text{Eu}_{0.1})\text{Al}_3\text{B}_4\text{O}_{12}$; $(\text{La}_{0.9}\text{Eu}_{0.1})\text{Al}_3\text{B}_4\text{O}_{12}$ and $(\text{Gd}_{0.9}\text{La}_{0.5}\text{Y}_{0.5}\text{Eu}_{0.1})\text{Al}_3\text{B}_4\text{O}_{12}$. These phosphors all fall within the claimed formulas. The phosphor is used as the source of red in fluorescent lamps which have a source of UV radiation located in a sealed housing. It is notoriously well known in the art that white light emitting fluorescent lamps contain blends of red, blue and green emitting phosphors. This suggests that the phosphor can be blended with at least a green and blue phosphor to form a white light emitting fluorescent lamp. Thus, the reference suggests the claimed blend and device.

Applicants' argument that this reference teaches $\text{Gd}_{1-x}\text{Eu}_x\text{B}_{1-y}(\text{Al/Ga})_y\text{O}_3$ is not convincing since it clearly teaches $((\text{Gd/Y/La})_{1-x}\text{Eu}_x)\text{Al}_3\text{B}_4\text{O}_{12}$. Applicants argue the reference does not suggest the claimed blend. This argument is not convincing since the reference teaches using the taught phosphor as the red phosphor in fluorescent lamps, and applicants have admitted that white light emitting fluorescent lamps conventionally contain blends of red, green and blue emitting phosphor. The rejection is maintained.

Claims 8-12 and 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 6,676,853.

This reference teaches a phosphor having the formula $\text{Gd}_{1-a}\text{Eu}_a\text{Al}_3\text{B}_4\text{O}_{12}$, where a is 0.003-0.5 and $(\text{Gd}_{1-x}\text{Y}_x)_{1-a}\text{Eu}_a\text{Al}_3\text{B}_4\text{O}_{12}$, where a is 0.003-0.5 and x is 0.005-0.95. Examples 4

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and 5 teach compositions where a is 0.05. The exemplified compositions fall within the claimed formula. Finally, the taught phosphors are used as the red phosphor in rare gas lamps, which have a source of UV radiation located in a sealed housing. It is notoriously well known in the art that trichromatic rare gas lamps contain blends of red, blue and green emitting phosphors. This suggests that the claimed phosphor can be blended with a green and blue phosphor to form a trichromatic rare gas lamp. Thus, the reference suggests the claimed blend and device.

While applicants are correct this reference teaches a display, it also teaches the phosphor can be used as the red phosphor in rare earth lamps in column 3, lines 40-43. As stated above, these lamps are known to include trichromatic or white light emitting lamps. The rejection is maintained.

Claims 2 and 3 are allowable over the cited art of record.

Claims 13, 17 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 16, 19 and 20 would be allowable if rewritten or amended to overcome the rejections under 35 U.S.C. 112 set forth in this Office action.

Claims 2, 3, 13, 16, 17, 19 and 27 are allowable for the reasons given in the previous action. The process of claim 20 for producing a phosphor having the formula $(D_{1-x}Eu_x)A_3B_4O_{12}$, where D is at least one of Y and a rare earth element excluding europium, A is at least one of Al , Ga , Sc and In and x is in the range of about 0.001 to about 0.3.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmk
January 30, 2006


C. Melissa Koslow
Primary Examiner
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